



Gasco Sediments Site PTW-NAPL Designation Workshop



Anchor QEA, LLC

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August 6, 2018

Purpose of Workshop

- Review the Gasco Sediments Site Statement of Work definition of PTW-NAPL applied in the *Engineering Evaluation/Cost Analysis* (Anchor QEA 2012) and adopted in the Record of Decision
- Review photographs of cores with and without PTW-NAPL to provide visual context
- Reach agreement with EPA and CDM Smith personnel on PTW-NAPL interpretation/designation prior to their oversight of the Pre-RD Group subsurface sediment core processing in and adjacent to the Gasco Sediments Site Project Area

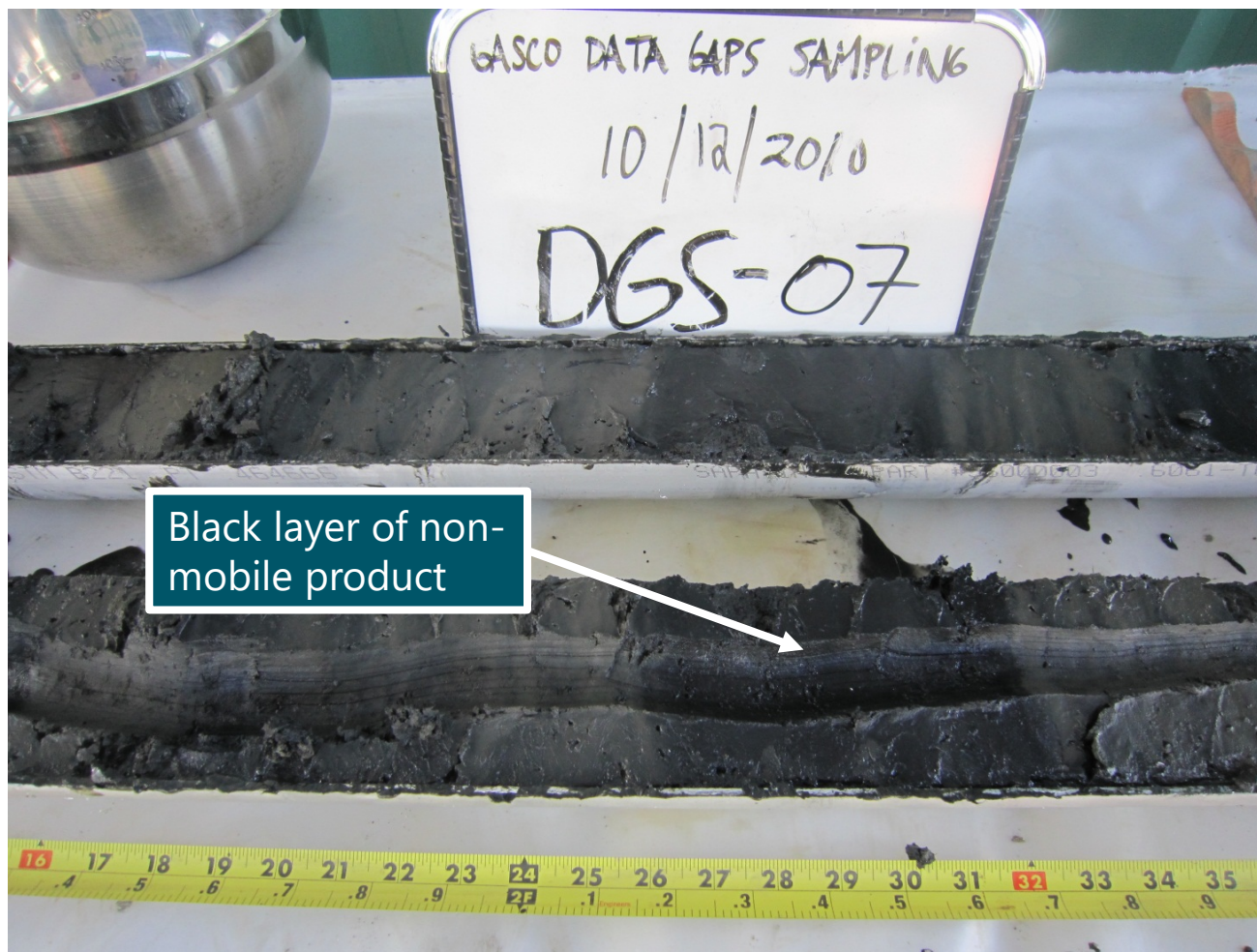
Site-Specific PTW-NAPL Definition

- PTW-NAPL defined as any layer or seam of product, regardless of thickness, that is clearly defined as liquid NAPL that is also mobile (i.e., “oozes” or “drips” out of the core during core observations)
- See Section 3.6.2.1 of NW Natural’s *Statement of Work – Gasco Sediments Site, Portland Harbor Superfund Site, Portland, Oregon* (EPA 2009)

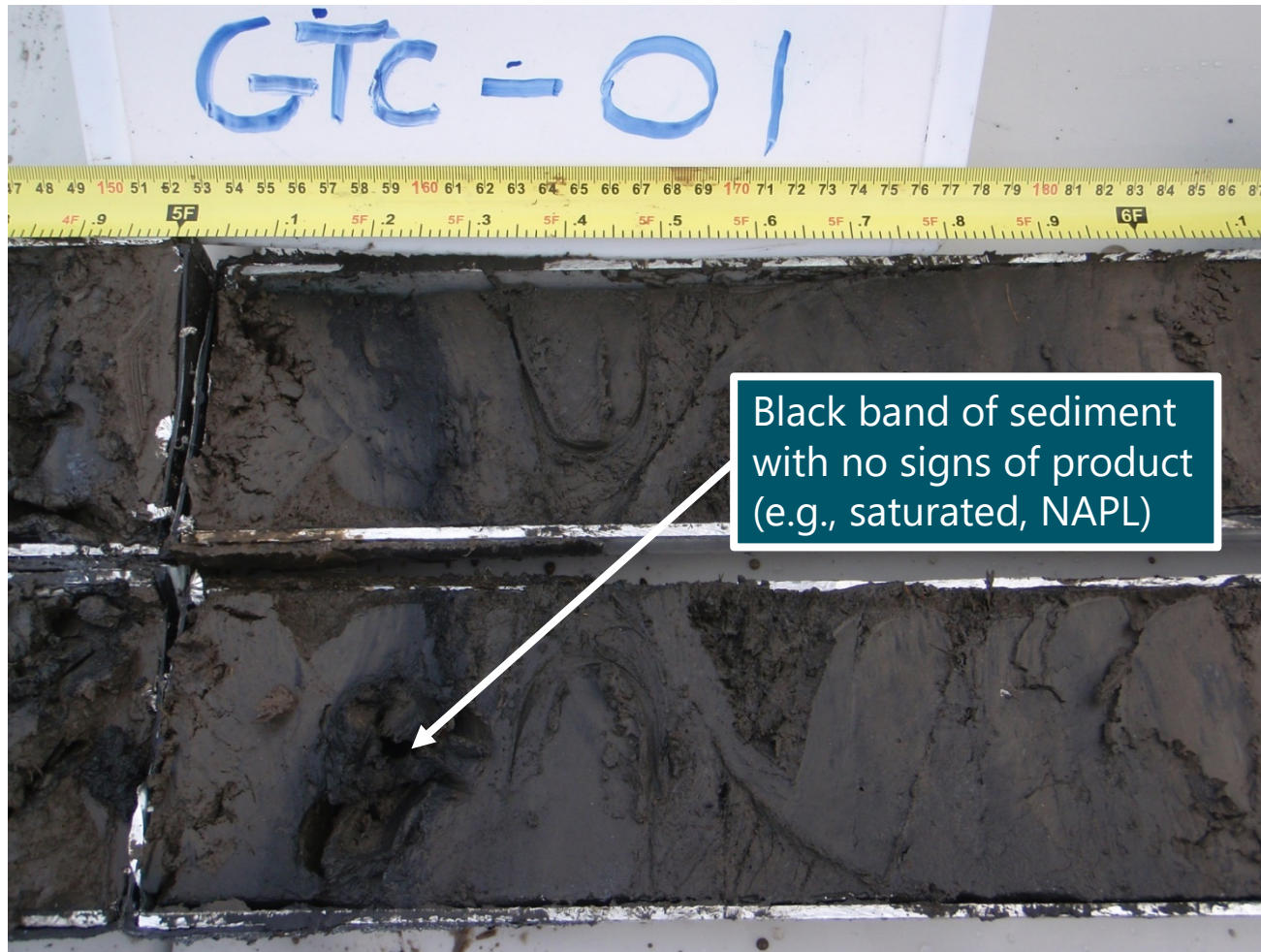
Visual Observations That Are Not PTW-NAPL

- Any layers, regardless of thickness and depth below mudline, of non-mobile product (e.g., bands, layers, saturated sediments, stained sediments)
- Petroleum odors that are not associated with visual evidence of mobile product beyond sheens and blebs
- Sheens that are not associated with more substantial visuals of mobile product
- Isolated product blebs or spots not associated with more substantial visuals of mobile product
- See Section 3.6.2.1 of NW Natural's *Statement of Work – Gasco Sediments Site, Portland Harbor Superfund Site, Portland, Oregon* (EPA 2009)

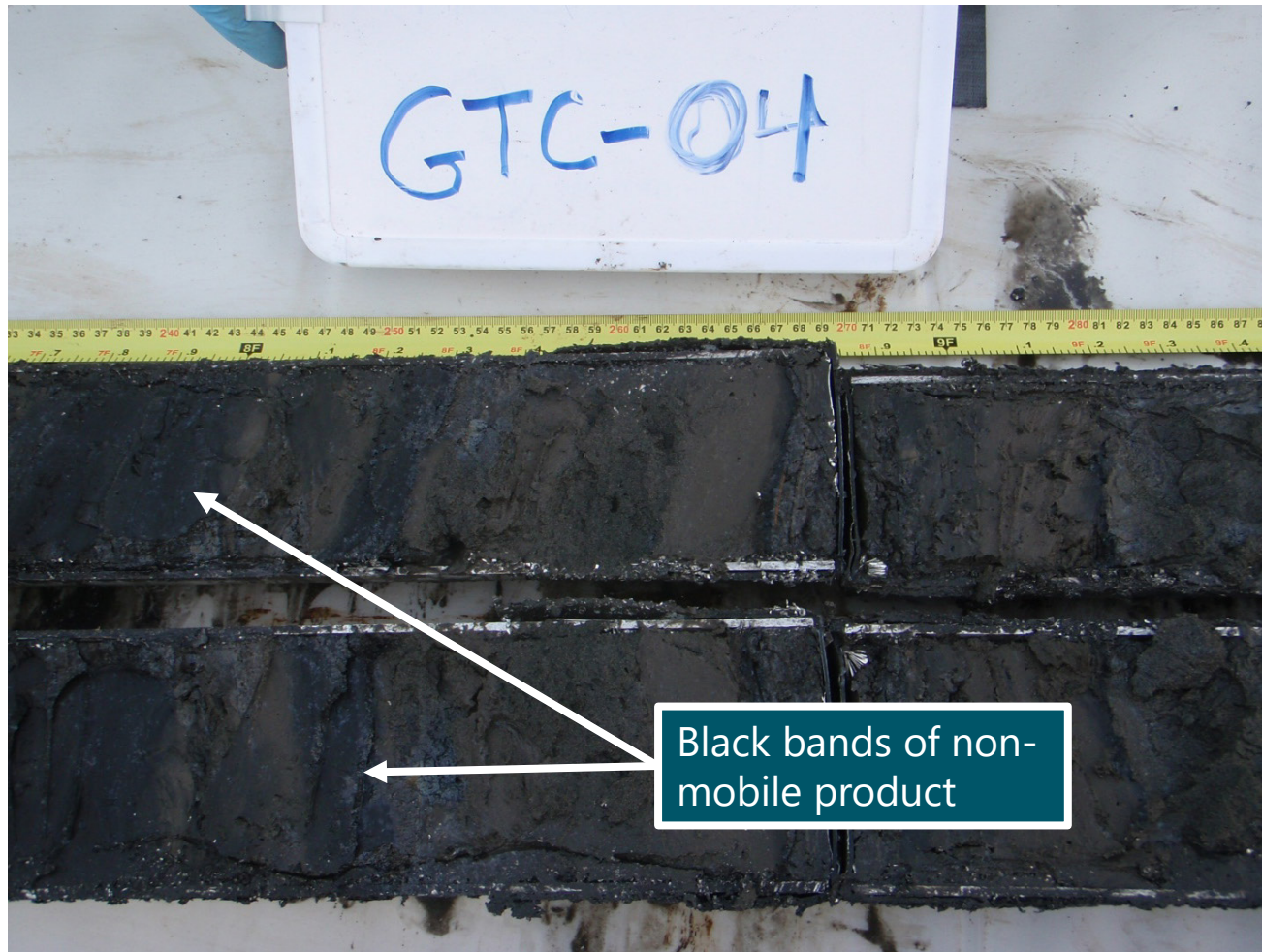
Non-PTW-NAPL Examples – Black Layer of Immobile Product



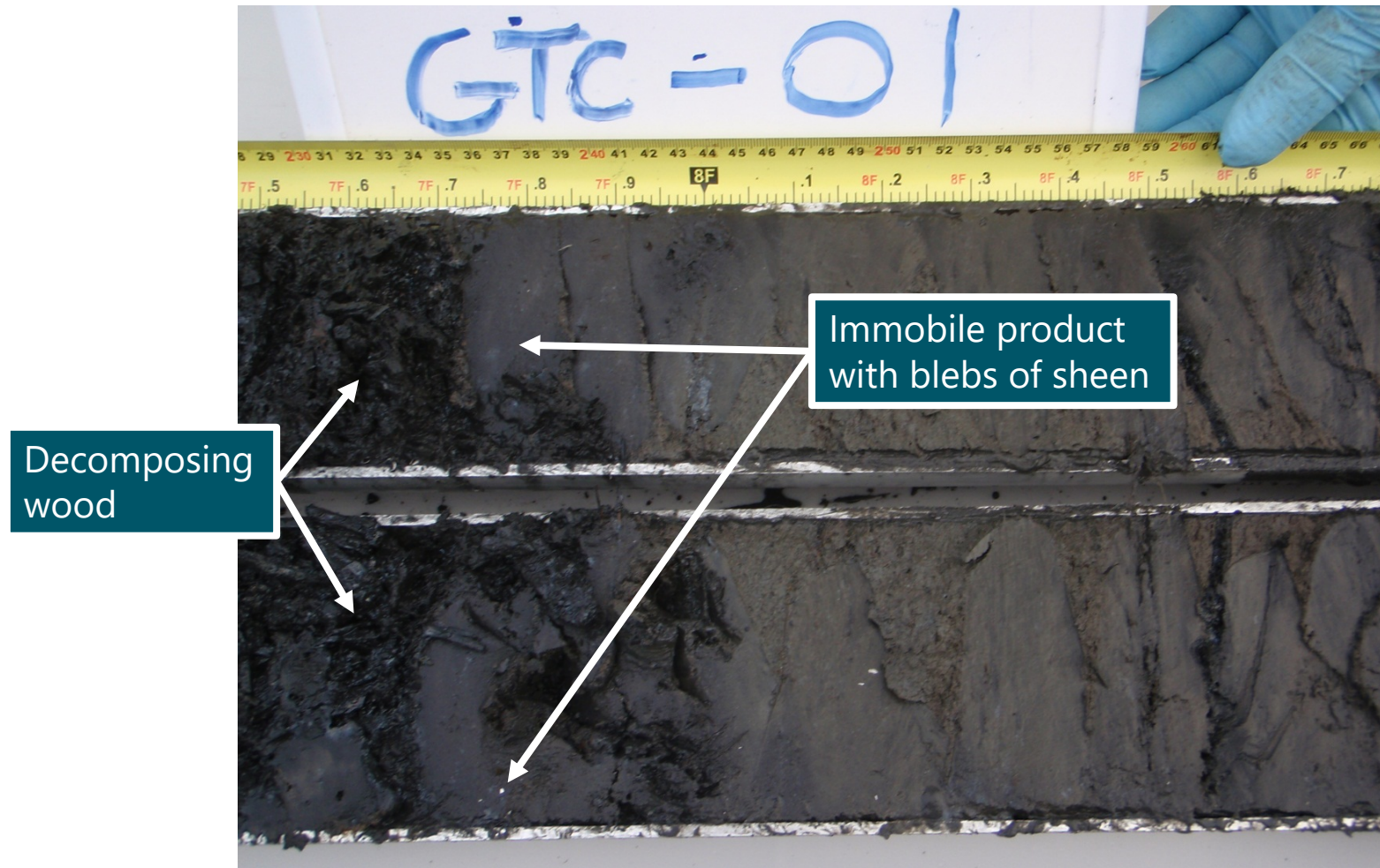
Non-PTW-NAPL Examples – Black Band of Immobile Product



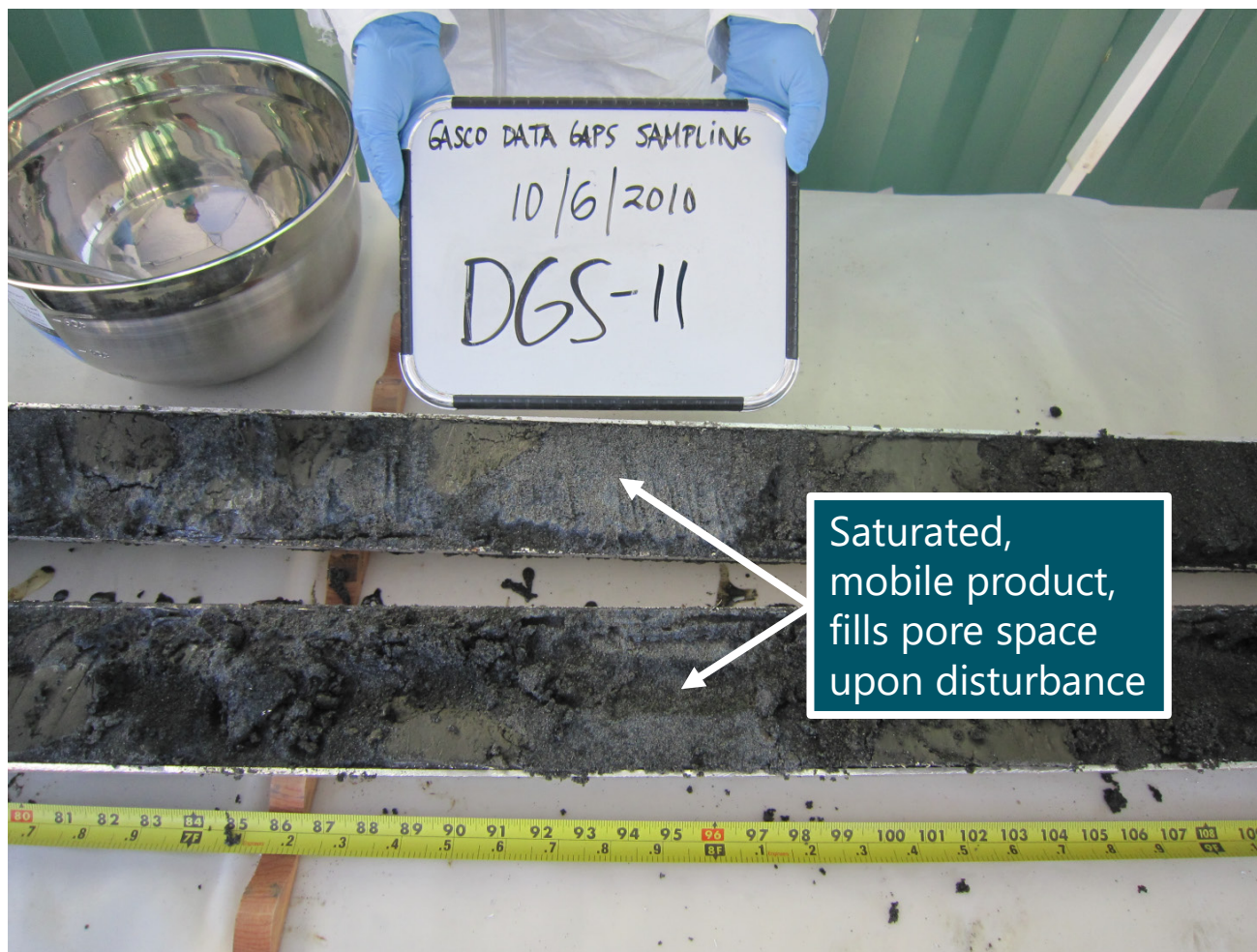
Non-PTW-NAPL Examples – Black Bands of Immobile Product with Sheen



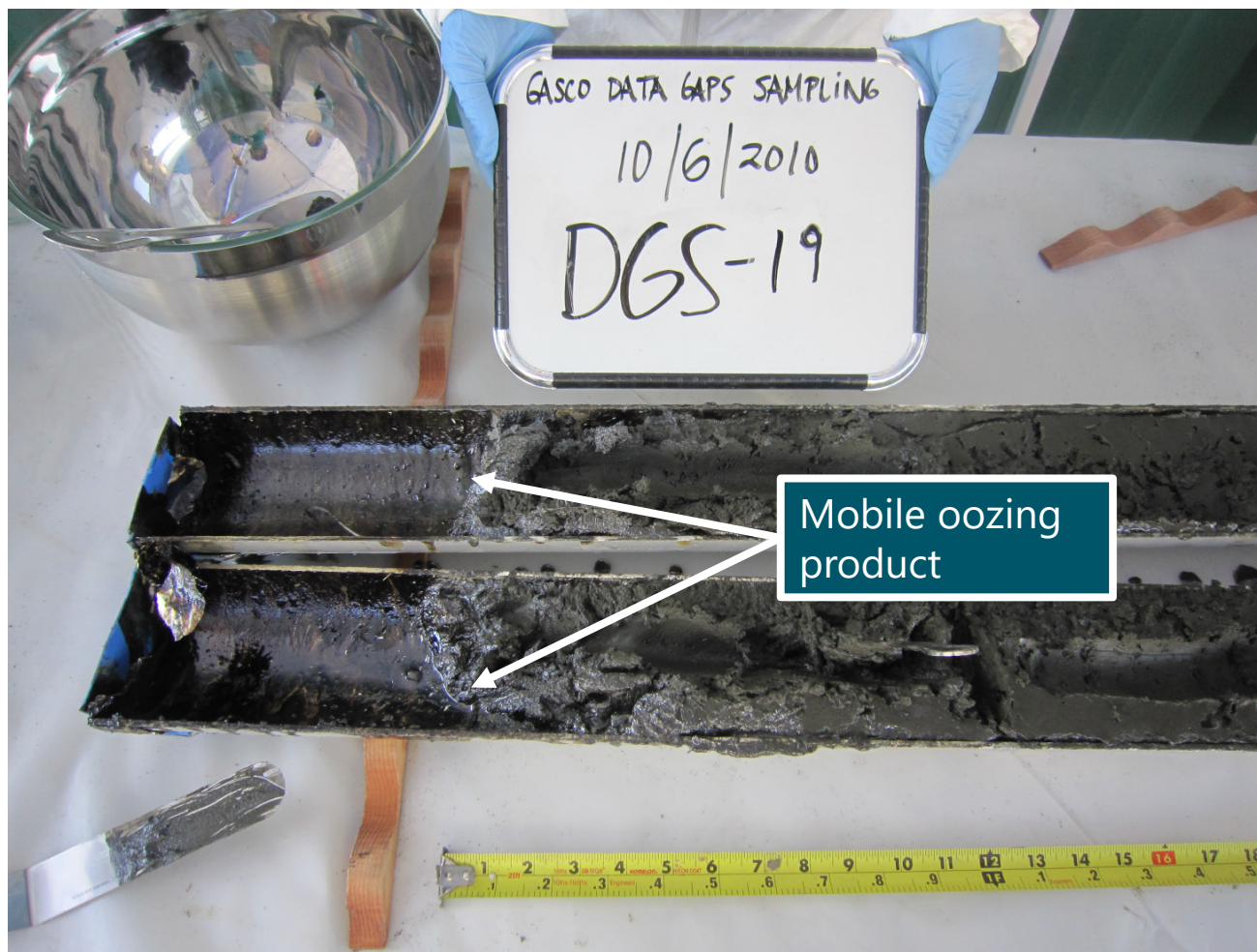
Non-PTW-NAPL Examples – Black Bands of Immobile Product with Decomposing Wood



PTW-NAPL Examples – Saturated Mobile Product in Sand



PTW-NAPL Examples – Liquid Product



PTW-NAPL Examples – Saturated Mobile Product in Sand and Liquid Product



Mobile product
oozes and
pools in
impressions

Conclusion

- Defining characteristic of PTW-NAPL is being mobile—ability to migrate and ooze
- Visual observations include liquid product and sand saturated with mobile product
- Immobile product layers, sheens, blebs, and decomposing wood do not meet definition of PTW-NAPL
- Ryan Barth at Anchor QEA, LLC, can be contacted at 206-719-3605 or rbarth@anchorqea.com to discuss PTW-NAPL designations at or in the vicinity of the NW Natural Gasco Sediments Site Project Area. He is available via FaceTime or Skype for real-time consultation during core processing.

Questions/Discussion

